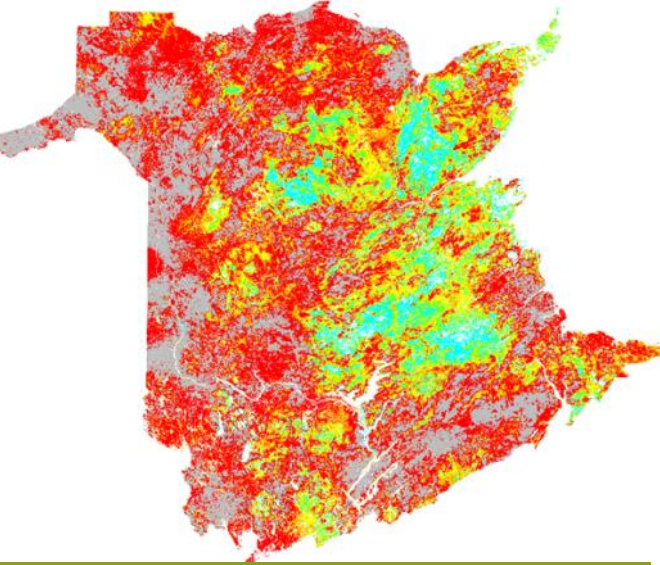


## PROMISING PARTNERSHIP: FORUS RESEARCH

*Leveraging the past to map future regeneration*



One of the most promising partnerships at NHRI in terms of regeneration research is the one developed with Chris Hennigar, the owner of FORUS Research.

The objective of the collaboration between NHRI and FORUS Research is to develop topographical-dependent and locally informed predictions of tree species occurrence probability across all of NB forests for 15 commercially important species, based on immature to old stand species compositions observations in NB over the past 100 years.

In order to achieve this, approximately 30,000 ground surveys of species composition from across New Brunswick and three separate provincial photo-interpreted stand inventories (1908s forest, 1990s forest, current forest) were used as observations of historical species occurrence. Species occurrence was correlated locally (within 2km) to digital elevation, slope, and drainage and mapped on a 20x20m grid across the entire province.

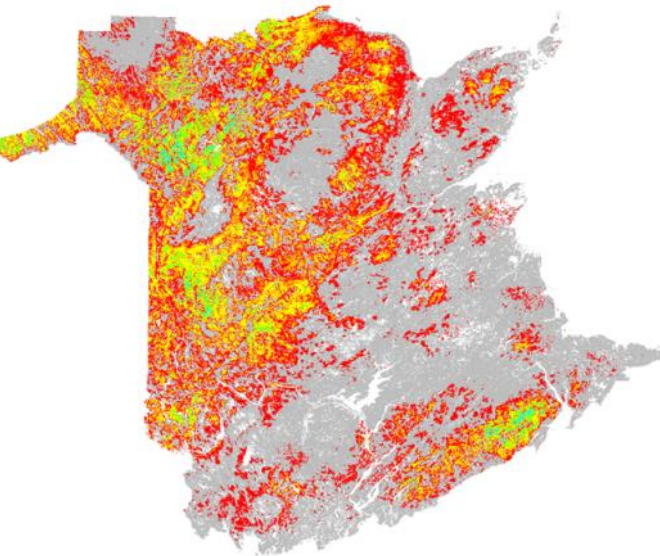
It's also important to note that other collaborators participated in the project by supplying some of the required data. All input data layers were provided by the New Brunswick Department of Energy and Resource Development and the depth to water table predictions were produced by the University of New Brunswick. Furthermore, this project is the outcome of a wider climate change research agenda at the University of New Brunswick that both FORUS Research and NHRI are collaborators on.

The end-result of the project will be the production of maps of species site occurrence probability based on recent historic species distributions. These maps should prove useful to the various stakeholders responsible for managing New Brunswick's forests. Once completed the maps will provide decision makers with some key information needed to make enlightened forest management choices, now and in the future:

- Species regeneration prediction and regeneration management planning;
- As an indicator of site productivity (e.g., well drained and nutrient demanding species occurrence probability);
- Maps of current species range and likely abundance in the province for use in projecting future forest species migration, range expansion or retraction under climate change;
- Useful for developing or correcting local errors in computer-based species predictions from satellites.

This collaboration between FORUS Research and NHRI is another good example of how we strive to build solid partnerships in order to produce applied research that is useful to those making the tough decisions about the future of our forests.

*“ The end-result of the project will be the production of maps of species site occurrence probability based on recent historic species distributions.”*



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